

In the claims:

1. A polishing pad comprising:
 - a. a first layer having an opening; and
 - b. a second layer wherein at least a portion of said second layer comprises
an at least partially transparent window,
and wherein said first layer is at least partially connected to said second layer,
and wherein said first layer absorbs at least two percent by weight of
polishing slurry based on total weight of said first layer.
2. The polishing pad of claim 1 wherein said first layer absorbs 50% or less by
weight of polishing slurry based on total weight of said first layer.
3. The polishing pad of claim 1 wherein said first layer is selected from
particulate polymer and crosslinked polymer binder; particulate polymer and
an organic polymer binder; sintered particles of thermoplastic resin; pressure
sintered powder compacts of thermoplastic polymer; polymeric matrices
impregnated with a plurality of polymeric microelements wherein each
polymeric microelement can have a void space therein, or combinations
thereof.
4. The polishing pad of claim 1 wherein said first layer has a thickness of at
least 0.020 inches.
5. The polishing pad of claim 4 wherein said first layer has a thickness of 0.150
inches or less.
6. The polishing pad of claim 1 wherein said second layer is selected from
substantially non-volume compressible polymers and metallic films and foils.
7. The polishing pad of claim 1 wherein said second layer is selected from
polyolefins; cellulose-based polymers; acrylics; polyesters and co-polyesters;
polycarbonate; polyamides; high performance plastics; or mixtures thereof.
8. The polishing pad of claim 1 wherein said second layer is selected from low
density polyethylene, high density polyethylene ultra-high molecular weight
polyethylene or polypropylene; cellulose acetate or cellulose butyrate; PET or

PETG; nylon 6/6 or nylon 6/12; polyetheretherketone, polyphenylene oxide, polysulfone, polyimide, or polyetherimide; or mixtures thereof.

9. The polishing pad of claim 1 wherein said second layer has a thickness of at least 0.0005 inches.
- 5 10. The polishing pad of claim 9 wherein said second layer has a thickness of 0.0650 inches or less.
11. The polishing pad of claim 1 wherein said first and second layers are at least partially connected by an adhesive material.
12. The polishing pad of claim 11 wherein said adhesive material is selected from
10 contact adhesives, pressure sensitive adhesives, structural adhesives, hot melt adhesives, thermoplastic adhesives, and curable adhesives, thermosetting adhesives; and combinations thereof.
13. The polishing pad of claim 1 wherein said opening in said first layer is at least partially aligned with said window in said second layer.
- 15 14. The polishing pad of claim 1 further comprising a third layer at least partially connected to said second layer, said third layer having an opening.
15. The polishing pad of claim 14 wherein said third layer is selected from natural rubber, synthetic rubbers, thermoplastic elastomer, foam sheet and combinations thereof.
- 20 16. The polishing pad of claim 14 wherein said third layer has a thickness of at least 0.04 inches.
17. The polishing pad of claim 16 wherein said third layer has a thickness of 0.100 inches or less.
18. The polishing pad of claim 14 wherein said first, second and third layers are
25 at least partially connected by an adhesive material.
19. The polishing pad of claim 14 wherein said opening in said first layer, said window in said second layer and said opening in said third layer are at least partially aligned.
20. A polishing pad comprising:
30 a. a first layer having an opening; and

b. a second layer wherein at least a portion of said second layer comprises
an at least partially transparent window,
and wherein said first layer is at least partially connected to said second layer,
and wherein said first layer has a porosity of at least two percent by volume
based on total volume of said first layer.

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21. The polishing pad of claim 20 wherein said first layer has a porosity of 50%
or less by volume based on total volume of said first layer.

22. The polishing pad of claim 20 wherein said first layer is selected from
particulate polymer and crosslinked polymer binder; particulate polymer and
an organic polymer binder; sintered particles of thermoplastic resin; pressure
sintered powder compacts of thermoplastic polymer; polymeric matrices
impregnated with a plurality of polymeric microelements wherein each
polymeric microelement can have a void space therein, or combinations
thereof.

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23. The polishing pad of claim 20 wherein said first layer has a thickness of at
least 0.020 inches.

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24. The polishing pad of claim 23 wherein said first layer has a thickness of
0.150 inches or less.

25. The polishing pad of claim 20 wherein said second layer is selected from
substantially non-volume compressible polymers and metallic films and foils.

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26. The polishing pad of claim 20 wherein said second layer is selected from
polyolefins; cellulose-based polymers; acrylics; polyesters and co-polyesters;
polycarbonate; polyamides; high performance plastics; or mixtures thereof.

27. The polishing pad of claim 1 wherein said second layer is selected from low
density polyethylene, high density polyethylene ultra-high molecular weight
polyethylene or polypropylene; cellulose acetate or cellulose butyrate; PET or
PETG; nylon 6/6 or nylon 6/12; polyetheretherketone, polyphenylene oxide,
polysulfone, polyimide, or polyetherimide; or mixtures thereof.

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28. The polishing pad of claim 20 wherein said second layer has a thickness of at
least 0.0005 inches.

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29. The polishing pad of claim 28 wherein said second layer has a thickness of 0.0650 inches or less.
30. The polishing pad of claim 20 wherein said first and second layers are at least partially connected by an adhesive material.
- 5 31. The polishing pad of claim 30 wherein said adhesive material is selected from contact adhesives, pressure sensitive adhesives, structural adhesives, hot melt adhesives, thermoplastic adhesives, curable adhesives, thermosetting adhesives and combinations thereof.
- 10 32. The polishing pad of claim 20 wherein said opening in said first layer is at least partially aligned with said window in said second layer.
33. The polishing pad of claim 20 further comprising a third layer at least partially connected to said second layer, said third layer having an opening.
34. The polishing pad of claim 33 wherein said third layer is selected from natural rubber, synthetic rubbers, thermoplastic elastomer, foam sheet and combinations thereof.
- 15 35. The polishing pad of claim 33 wherein said third layer has a thickness of at least 0.04 inches.
36. The polishing pad of claim 35 wherein said third layer has a thickness of 0.100 inches or less.
- 20 37. The polishing pad of claim 30 wherein said first, second and third layers are at least partially connected by an adhesive material.
38. The polishing pad of claim 30 wherein said opening in said first layer, said window in said second layer and said opening in said third layer are at least partially aligned.
- 25 39. A polishing pad comprising:
- a. a first layer having an opening; and
 - b. a second layer wherein at least a portion of said second layer comprises an at least partially transparent window,
- and wherein said first layer is at least partially connected to said second layer, and wherein said first layer has a percent volume compressibility greater than
- 30 said second layer.

40. The polishing pad of claim 39 wherein said first layer has a percent volume compressibility of at least 0.3 % when a load of 20 psi is applied.
41. The polishing pad of claim 40 wherein said first layer has a percent volume compressibility of 3 % or less when a load of 20 psi is applied.
- 5 42. The polishing pad of claim 39 wherein said second layer is substantially non-volume compressible.
43. The polishing pad of claim 39 wherein said first layer is selected from particulate polymer and crosslinked polymer binder; particulate polymer and an organic polymer binder; sintered particles of thermoplastic resin; pressure
10 sintered powder compacts of thermoplastic polymer; polymeric matrices impregnated with a plurality of polymeric microelements wherein each polymeric microelement can have a void space therein, or combinations thereof.
44. The polishing pad of claim 39 wherein said second layer is selected from
15 substantially non-volume compressible polymers and metallic films and foils.
45. The polishing pad of claim 39 wherein said second layer is selected from polyolefins; cellulose-based polymers; acrylics; polyesters and co-polyesters; polycarbonate; polyamides; high performance plastics; or mixtures thereof.
46. The polishing pad of claim 39 wherein said second layer is selected from low
20 density polyethylene, high density polyethylene ultra-high molecular weight polyethylene or polypropylene; cellulose acetate or cellulose butyrate; PET or PETG; nylon 6/6 or nylon 6/12; polyetheretherketone, polyphenylene oxide, polysulfone, polyimide, or polyetherimide; or mixtures thereof.
47. The polishing pad of claim 39 wherein said first and second layers are at least
25 partially connected by an adhesive material.
48. The polishing pad of claim 47 wherein said adhesive material is selected from contact adhesives, pressure sensitive adhesives, structural adhesives, hot melt adhesives, thermoplastic adhesives, curable adhesives, thermosetting adhesives and combinations thereof.

49. The polishing pad of claim 39 wherein said opening in said first layer is at least partially aligned with said window in said second layer.
50. The polishing pad of claim 39 further comprising a third layer at least partially connected to said second layer, said third layer having an opening.
- 5 51. The polishing pad of claim 50 wherein said third layer is selected from natural rubber, synthetic rubbers, thermoplastic elastomer, foam sheet and combinations thereof.
52. The polishing pad of claim 50 wherein said first, second and third layers are at least partially connected by an adhesive material.
- 10 53. The polishing pad of claim 50 wherein said opening in said first layer, said window in said second layer and said opening in said third layer are at least partially aligned.
54. The polishing pad of claim 39 wherein at least a portion of said window comprises a coating.
- 15 55. The polishing pad of claim 54 wherein said coating comprises a resin coating.
56. The polishing pad of claim 55 wherein said resin coating is selected from thermoplastic acrylic resins, thermoset acrylic resins, urethane systems, epoxy resins, polyester resins, or mixtures thereof.
57. The polishing pad of claim 39 wherein said first layer comprises grooves on a polishing surface.
- 20 58. The polishing pad of claim 39 wherein said first layer comprises a pattern on a polishing surface.
59. A method of preparing a polishing pad comprising at least partially connecting a first layer having an opening to a second layer, wherein at least a portion of said second layer comprises an at least partially transparent window, and wherein said first layer absorbs at least two percent by weight of polishing slurry based on total weight of said first layer.
- 25 60. The method of claim 59 further comprising at least partially connecting a third layer having an opening to said second layer.

61. The method of claim 59 wherein said first and second layers are at least partially connected by an adhesive material.
62. A method of preparing a polishing pad comprising at least partially connecting a first layer having an opening to a second layer, wherein at least a portion of said second layer comprises an at least partially transparent window, and wherein said first layer has a porosity of at least two percent by volume based on total volume of said first layer.
63. The method of claim 62 further comprising at least partially connecting a third layer having an opening to said second layer.
64. The method of claim 62 wherein said first and second layers are at least partially connected by an adhesive material.
65. A method of preparing a polishing pad comprising at least partially connecting a first layer having an opening to a second layer, wherein at least a portion of said second layer comprises an at least partially transparent window, and wherein first layer has a percent volume compressibility greater than said second layer.
66. The method of claim 65 further comprising at least partially connecting a third layer having an opening to said second layer.
67. The method of claim 65 wherein said first and second layers are at least partially connected by an adhesive material.
68. A polishing pad comprising:
- a. a first layer having an opening;
 - b. a second layer wherein at least a portion of said second layer comprises an at least partially transparent window; and
 - c. a third layer having an opening,
- wherein said first layer is at least partially connected to said second layer and said second layer is at least partially connected to said third layer, and wherein said third layer is softer than said first layer.